IN THE CLAIMS

Please amend the claims as follows:

Claims 1-23 (Canceled).

Claim 24 (New): A plasma processing apparatus for performing plasma processing, comprising an electromagnetic wave source for generating electromagnetic waves, plural rectangular waveguides, a plurality of slots formed in the rectangular waveguides and comprising a waveguide antenna, a plurality of electromagnetic wave radiation windows made of a dielectric material, and a vacuum chamber, and configured such that a plasma is generated by the electromagnetic waves radiated from the slots into the vacuum chamber through the electromagnetic wave radiation windows, wherein:

the rectangular waveguides are linear waveguides, provided in contact with the vacuum chamber, and arranged such that the adjacent waveguides are in contact with each other at their elongated side faces;

the plasma processing apparatus includes a linear electromagnetic wave distributing waveguide directly communicating with ends of the plural rectangular waveguides at a sidewall surface thereof along a longitudinal direction of the electromagnetic wave distributing waveguide, the distributing waveguide having one end connected to the electromagnetic wave source, and distributing the electromagnetic waves from the electromagnetic wave source into the plural rectangular waveguides; and

the electromagnetic wave radiation windows comprise parts of a wall of the vacuum chamber such that a vacuum can be maintained in the vacuum chamber;

a transmission path of the electromagnetic waves is bent through substantially 90° to the plurality of linear and rectangular waveguides from the electromagnetic wave distributing waveguide; and

the electromagnetic wave distributing waveguide and the plural rectangular waveguides are arranged on substantially the same plane.

Claim 25 (New): A plasma processing apparatus for performing plasma processing, comprising an electromagnetic wave source for generating electromagnetic waves, an electromagnetic wave distributing waveguide, plural rectangular waveguides connected to the electromagnetic wave distributing waveguide, a plurality of slots formed in the rectangular waveguides and comprising a waveguide antenna, electromagnetic wave radiation windows made of a rectangular dielectric material provided on each rectangular waveguide to face the plurality of slots, and a vacuum chamber in which the electromagnetic wave radiation windows is provided as a radiation surface of the electromagnetic wave, and configured such that a plasma is generated by the electromagnetic wave radiated from the slots into the vacuum chamber through the electromagnetic wave radiation windows, wherein:

the rectangular waveguides are linear waveguides, provided in contact with the electromagnetic wave radiation windows, and arranged such that the adjacent waveguides are in contact with each other at their elongated side faces;

the electromagnetic wave distributing waveguide is located outside a surface of the vacuum chamber, and is a linear waveguide for distributing the electromagnetic waves output from the electromagnetic wave source to the plural rectangular waveguides, the electromagnetic wave distributing waveguide directly communicating with each one of the plural rectangular waveguides at a sidewall surface along a longitudinal direction of the electromagnetic wave distributing waveguide; and

each of the plural waveguides is branched from an electric field plane or a plane perpendicular to a magnetic field plane of the electromagnetic wave distributing waveguide.

Claim 26 (New): The plasma processing apparatus according to claim 24, wherein the shortest distance between opposite inner surfaces of each of the adjacent waveguides is not larger than the width between facing inner surfaces of each of the rectangular waveguides.

Claim 27 (New): The plasma processing apparatus according to claim 24, wherein the plural rectangular waveguides are branched from the electromagnetic wave distributing waveguide to surfaces of facing walls of the electromagnetic wave distributing waveguide.

Claim 28 (New): The plasma processing apparatus according to claim 25, wherein the electromagnetic wave radiation windows are arranged such that a vacuum condition is maintained between the electromagnetic wave radiation windows and the vacuum chamber.

Claim 29 (New): The plasma processing apparatus according to claim 24, wherein the slots are distributed substantially uniformly over an entire area in each of the rectangular waveguides that is to be subjected to the plasma processing.

Claim 30 (New): The plasma processing apparatus according to claim 25, wherein the electromagnetic wave radiation windows are hermetically arranged in a manner to correspond commonly to plural slots, and the vacuum can be maintained between the plural electromagnetic wave radiation windows and the vacuum chamber.

Claim 31 (New): The plasma processing apparatus according to claim 24, wherein:

the rectangular electromagnetic wave radiation windows are substantially equal in width to the linear rectangular waveguide and are arranged in a manner to correspond to each of the linear rectangular waveguides;

a major axis direction of the rectangular waveguide substantially coincides with that of the electromagnetic wave radiation windows;

a length in the major axis direction of the rectangular waveguide substantially coincides with that of the electromagnetic wave radiation windows; and

a period of the major axis direction of the rectangular waveguide substantially coincides with that of the electromagnetic wave radiation windows.

Claim 32 (New): The plasma processing apparatus according to claim 31, wherein a length in the major axis direction of the electromagnetic wave radiation windows is shorter than that of the rectangular waveguides.